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*North America's Leader in Hazardous Material Information Management*  
*1905 Aston Avenue, Carlsbad, CA 92008*  
*Phone (800) 451-8346 Fax (760) 602-8888*

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## MSDS PRODUCT INFORMATION

Date: 10/07/2005  
To: MSDS Requester  
From: 3E Company  
Subject: The MSDS you have requested

☐ MSDS NOT REQUIRED

In response to your request for a Material Safety Data Sheet, according to the OSHA Hazard Communication Standard (Right-to-Know), the following item is an article. Articles are defined in 29 CFR 1910.1200(c). Products such as Drugs, cosmetics, food, or alcoholic beverages, wood or wood products, and tobacco or tobacco products, as defined in 29 CFR 1910.1200(b)(6), are exempt from the Hazard Communication Standard. Items that are considered articles, as defined in 29 CFR 1910.1200(c), are also exempt from this Standard. Therefore, the manufacturer is not required to provide an MSDS for this product.

☒ MSDS DISCONTINUED PRODUCT

In response to your request for a Material Safety Data Sheet, the manufacturer has discontinued the product listed below. The MSDS Attached is the most current version, or an MSDS is no longer available.

☐ MSDS BEST COPY AVAILABLE

The MSDS attached is the best copy available from the manufacturer.

☒ MANUFACTURER NO LONGER IN BUSINESS

In response to your request for a Material Safety Data Sheet, a current MSDS could not be obtained for this product. It has been determined that the manufacturer listed below is no longer in business. A current address and phone number could not be located.

Manufacturer: Specialty Environmental Systems  
Product Name: Citristrip (DISCONTINUED)

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Rev: 01/24/96

## MATERIAL SAFETY DATA SHEET

### CITRISTRIP

The development of this Material Safety Data Sheet relies upon information provided to us by the raw material supplier. This Material Safety Data Sheet will be updated as any changes occur on their MSDS. Further information can be obtained from our offices.

#### Section I. Supplier Information

### SPECIALTY ENVIRONMENTAL TECHNOLOGIES, INC.

4520 GLENMEADE LANE  
AUBURN HILLS, MI 48326

810-340-0400

Emergency Telephone Number: Chemtrec 1-800-424-9300  
For Health Hazard Information Call: 810-340-0400

#### Section II. Hazardous Ingredients/Identity

Hazardous Component(s) Chemical & Common Name	CAS NUMBER	OSHA		ACGIH		MFR LIMITS	% WT
		PEL/TWA	PEL/CEILING	TLV/TWA	TLV/STEL		
N-Methyl-2-Pyrrolidone	872-50-4	N/E	N/E	N/E	N/E	N/E	65-90
D-Limonene	5989-27-5	N/E	N/E	N/E	N/E	N/E	10-35
Thickener	9004-64-2	15 mg/m3	15 mg/m3	10 mg/m3	N/E	N/E	< 5
Thickener	9004-65-3	N/E	N/E	N/E	N/E	10 mg/m3	< 5

#### LEGEND

N/A = Not Applicable    N/E = Not Established    ' = Respirable Dust    " = Total Dust

All components of this product are listed on the Toxic Substances Control Act (TSCA) Inventory and the Canadian Domestic Substances List (DSL), or are exempt from listing.

#### Section III. Physical & Chemical Characteristics

Boiling Point: 310-400°F

Specific Gravity(H2O = 1): 0.96-1.02

Vapor Pressure(mmHg): < 2

Vapor Density(air = 1): Approximately 3.4

Solubility In Water: Moderate

Reactivity In Water: None

Weight Per Gallon (lb/gal): 8.0-8.5 lbs/gal

Percent Volatile By Volume: 99%

Percent Solid By Weight: 1%

Appearance and Odor: Thick, orange liquid; citrus odor.

Theoretical VOC ( > 0.1 mm Hg @ 20° C ): 7.9-8.4 lbs/gal

Analytical VOC ( EPA Method 24 ): 7.9 lbs/gal maximum

pH: N/A, product is solvent based

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#### Section IV. Fire & Explosion Data

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Flash Point: 111°F minimum

Method Used: Pensky-Martens Closed Cup

Flammable Limits in Air % by Volume: LEL: 1 UEL: 8.9

Extinguisher Media: Carbon dioxide, foam, dry chemical, or water fog

Special Fire Fighting Procedures: Self-contained breathing apparatus when fighting fire in an enclosed area.

Unusual Fire and Explosion Hazards: Low fire hazard when exposed to heat and flames. Can react with oxidizing agents.

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#### Section V. Physical Hazards (Reactivity Data)

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Stability:

Stable

Conditions to Avoid:

Excessive heat and open flames

Incompatibility (Materials to Avoid):

Strong acids and oxidizing agents; D-limonene reacts explosively with iodine pentafluoroethylene.

Hazardous Decomposition Products:

Carbon monoxide, carbon dioxide, and nitrogen oxides

Hazardous Polymerization:

Will not occur

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#### Section VI. Health Hazards

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Primary Routes of Entry: Inhalation-YES Skin-YES Ingestion-NO

Signs and Symptoms of Exposure

**INHALATION:** High vapor concentrations may produce nose, throat, and respiratory irritation and may cause CNS depression.

**SKIN CONTACT:** Liquid is mildly irritating to the skin. Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis.

**EYES:** Irritation and possible temporary corneal clouding.

**INGESTION:** Ingestion of large amounts causes gastric disturbances. Nausea and vomiting may result.

Toxicological Data

D-Limonene:

Health Hazards from Acute Exposure: Harmful if swallowed. Ingestion may cause vomiting, headache, and other medical problems. May be irritating to skin and eyes. Skin contact may cause slight redness. Contains a potential skin sensitizer. Eye contact can cause moderate to high irritation. Inhalation can cause nose, throat, and respiratory tract irritation, coughing and headache. Health Hazards from Chronic Exposure: Prolonged or repeated exposure can cause drying, defatting, and dermatitis of skin. D-limonene is NOT listed as carcinogenic by NTP, OSHA, or IARC. FDA and WHMIS list d-limonene as GRAS - "generally recognized as safe". Toxicity Data: RIFM lists acute oral LD50 (rat) > 5g/kg; acute dermal LD50 (rabbit) > 5 g/kg. IPR-Mus TDLO: 4800 mg/kg/8w-I:ETA. ORL-Mus TDLO: 67 mg/kg/39w-I:ETA. 5,2-3,11-101094

N-Methyl-2-Pyrrolidone (NMP):

Inhalation: No significant signs or symptoms indicative of any adverse health hazard are expected to occur as a result of inhalation exposure. Skin: May cause delayed irritation and blistering. Extensive/prolonged or repeated exposure to this material can result in significant absorption. Eyes: May cause moderate irritation, including burning sensation, tearing, redness, and swelling. Ingestion: May be a slight health hazard if ingested in large quantities.

Chronic Hazards: NMP was not carcinogenic in rats exposed to 0.4 mg/L NMP vapors for 2 years. NMP is not mutagenic in the Ames test. NMP was reported to be fetotoxic and teratogenic at high doses in laboratory animals. Human experience has demonstrated redness, cracking and blistering of skin through repeated or prolonged contact with NMP. Rats exposed to an aerosol-vapor mixture of NMP at 1.0 mg/L (1g/m3) for 6 hours/day, 5 days/week, for 4 weeks developed excessive

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mortality, focal pneumonia, bone marrow hypoplasia and atrophy of lymphoid tissue. The No Observable Effect Level (NOEL) was 0.5 mg/L. In a separate study of chronic duration (2 years), no adverse effects were identified at the highest dose tested (0.4 mg/L). NMP was not carcinogenic in this study (Fund. and Appl. Tox. 9:222-235, 1987). NMP was reported to be fetotoxic and to increase the incidence of skeletal abnormalities when administered dermally to rats during gestation (Fund and Appl. Tox. 2:73-6, 1982). At very high repeated oral doses (750 mg/kg), litters were reduced in number and individual pups weighed less. Some skeletal abnormalities were seen. This observation has also been observed in mice using intraperitoneal injection (a route of administration of questionable significance to humans), also at high dosages which caused toxic effects in the mother animal. NMP was not fetotoxic or teratogenic in rats exposed to NMP vapors up to 0.36 mg/L during gestation (Fund and Appl. Tox. 9:222-235, 1987). NMP has been reported to cause aneuploidy in *Saccharomyces*, but is not mutagenic in the Ames test (Env. and Molec. Mut. 11(1) 31-40, 1988).  
0-13,12,15,19-121294

#### Thickener:

Signs/Symptoms of Overexposure in the Workplace - Eyes: May cause mild irritation. Skin: None known. Inhalation: May cause respiratory irritation. Ingestion: None known. Medical Conditions Aggravated by Exposure: None known.  
0,16-10,7,2-052893

#### Thickener:

Inhalation: Single exposure to dust is not likely to be hazardous. Skin: Essentially non-irritating. A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts. Eyes: Solid or dust may cause corneal injury due to mechanical action. Ingestion: Single dose oral toxicity is low. No hazards anticipated from ingestion incidental to industrial exposure. The oral LD50 for rats is > 10,000 mg/kg. Systemic & Other Effects: Based on available data, repeated exposures are not anticipated to cause any significant adverse effects. Birth defects are unlikely. Exposures having no adverse effects on the mother should have no effect on the fetus.  
3-12,I,F,G,13,7,12-021092

#### Emergency and First Aid Procedures

**INHALATION:** Remove to fresh air. Aid in breathing, if necessary, and get medical attention.

**SKIN:** Immediately wash skin with large amounts of soap and water. Remove contaminated clothing and shoes; wash before reuse. Get medical attention if irritation persists after washing.

**EYES:** Flush eyes immediately with water for at least 15 minutes. If irritation persists, call a physician.

**INGESTION:** Call a physician or emergency medical facility immediately.

#### Chemicals listed as potential carcinogens:

National Toxicology: NO

IARC Monographs: NO

OSHA Program: NO

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#### Section VII. Special Precautions and Spill/Leak Procedure

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##### Precautions to be Taken in Handling and Storage:

Store in a dry location at room temperature. Avoid skin and eye contact. Wash thoroughly after handling. Avoid breathing vapor. Use with adequate ventilation. Keep this container and vapors from this container away from heat and flame. Keep container closed and maintain all original markings and labels.

Other Precautions: None known.

##### Steps to be Taken in Case Material is Spilled:

Shut off and eliminate all ignition sources. Keep people away. Recover free product. Add sand, earth or other suitable absorbent to spill area. Minimize breathing vapors. Minimize skin contact. Ventilate confined spaces. Open all windows and doors. Keep product out of sewers and watercourses by diking or impounding. Advise authorities if product has entered or may enter sewers, watercourses, or extensive land areas. Assure conformity with applicable governmental regulations. Continue to observe precautions for volatile, combustible vapors from absorbed material.

##### Waste Disposal Methods (Federal, State, Local)

In accordance with all federal, state and local requirements.

##### CERCLA (Superfund) Reportable Quantity (in lbs):

None

RCRA Hazardous Waste No.: D001

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#### Section VIII. Special Protection Information/Control Measures

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**Respiratory Protection (Specify Type):** Use NIOSH/MSHA approved respirator where high vapor concentrations are present.

**Ventilation:**

**Local Exhaust:** Special ventilation is suggested at points where vapors can be expected to escape to the workplace air.

**Mechanical Exhaust:** Mechanical room ventilation is expected to be adequate.

**Other:** N/A

**Protective Gloves:** Butyl rubber and FEP Teflon provide the best resistance.

**Eye Protection:**

Wear safety glasses. Contact lenses should not be worn. Chemical goggles and/or faceshield should be worn where splashing is possible.

**Other Protection:** Eye bath, safety shower, chemical resistant apron and boots.

**Additional Recommendations:**

Protective equipment and clothing should be selected, used and maintained according to applicable standards and regulations. For further information, contact the clothing or equipment manufacturer. Monitor workers if elevated TCV's are suspected.

**Work/Hygienic Maintenance Practices:**

Avoid contact with skin and avoid breathing vapors. Do not eat, drink, or smoke in work area. Wash hands prior to eating, drinking, or using restrooms.

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#### Section IX. Miscellaneous

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**Hazardous material description:**

Proper shipping name, Hazard class, Hazard ID#, Packing Group

Non-regulated by D.O.T. for domestic ground transport in non-bulk packagings

Paint Related Material, Combustible Liquid, UN 1263, PG III [for domestic ground transport in bulk]

Paint Related Material, 3, UN 1263, PG III [for international, air, and water shipments]

**SARA 313 Information**

Ingredients subject to the reporting requirements of section 313 of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

N-methyl-2-pyrrolidone, CAS# 872-50-4, 65-90%

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**Degree of water solubility as stated in Section III**

Negligible	Less than .1%
Slight	0.1% - 1%
Moderate	1% - 10%
Appreciable	More than 10%
Complete	100%

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We believe the recommendations and technical information contained herein to be accurate. However, they are given without warranty or guarantee, expressed or implied, and we assume no responsibility for losses or damage, direct or indirect, as a result of their use.